

What Is Claimed Is:

(1) A numeric value search apparatus characterized in that it comprises the following:

- a storage unit which stores multiple pieces of digitized numeric value data;

- a resolution specifying means which specifies a frequency distribution resolution;

- a frequency distribution creation unit which determines the frequency distribution of numeric value data in the aforementioned storage unit using the resolution specified by this resolution specifying means; and

- a computation unit which determines the numeric value range or numeric value with the prescribed rank from the frequency distribution determined by this frequency distribution creation unit;

wherein the aforementioned resolution specifying means increases the resolution specified to the aforementioned frequency distribution creation unit in steps, based on the computation results of the aforementioned computation unit.

(2) The numeric value search apparatus of Claim 1, characterized in that the frequency distribution creation unit comprises the following:

- a data count region which comprises multiple count value holding means for holding count values; and

- a counting means which reads the numeric value data of the aforementioned storage unit, and increments the count values of the count value holding means in the aforementioned data count region corresponding to the read numeric value data.

(3) The numeric value search apparatus of Claim 2, characterized in that the frequency distribution creation unit comprises a count value addition means which adds the number of pieces of numeric value data outside the range of numeric values of the prescribed rank, and stores them in the aforementioned count value holding means.

(4) The numeric value search apparatus of any of the Claims 1 through 3, characterized in that the computation unit performs cumulative computation.

(5) The numeric value search apparatus of any of the Claims 1 through 4, characterized in that the computation unit determines a median.

(6) The numeric value search apparatus of any of the Claims 1 through 5, characterized in that it is used in a waveform measurement apparatus which digitizes a measured waveform, converts it to numeric value data, and performs prescribed analysis and waveform processing.

(7) A numeric value search method characterized in that it comprises the following:

- a procedure which specifies a frequency distribution resolution;
- a procedure which determines the frequency distribution of the digitized numeric value data in the storage unit, using this specified resolution; and

- a procedure which determines the numeric value range or numeric value with the prescribed rank from this determined frequency distribution;

wherein the specified resolution is increased in steps based on the range of numeric values of the prescribed rank.

(8) A numeric value search apparatus characterized in that it

comprises the following:

a storage unit which stores multiple pieces of digitized numeric value data;

a resolution specifying means which specifies a cumulative count distribution resolution;

a cumulative count distribution creation unit which determines the cumulative count distribution of numeric value data in the aforementioned storage unit using the resolution specified by this resolution specifying means; and

a computation unit which determines the numeric value range or numeric value with the prescribed rank from the cumulative count distribution determined by this cumulative count distribution creation unit;

wherein the aforementioned resolution specifying means increases the resolution specified to the aforementioned cumulative count distribution creation unit in steps, based on the computation results of the aforementioned computation unit.

(9) The numeric value search apparatus of Claim 8, characterized in that the cumulative count distribution creation unit comprises the following:

a data count region which comprises multiple count value holding means for holding count values; and

a counting means which reads the numeric value data of the aforementioned storage unit, and increments the count values of the count value holding means in the aforementioned data count region corresponding to the read numeric value data.

(10) The numeric value search apparatus of Claim 8 or 9, characterized in that the computation unit determines a median.

(11) The numeric value search apparatus of any of the Claims 8 through 10, characterized in that it is used in a waveform measurement apparatus which digitizes a measured waveform, converts it to numeric value data, and performs prescribed analysis and waveform processing.

(12) A numeric value search method characterized in that it comprises the following:

- a procedure which specifies a cumulative count distribution resolution;

- a procedure which determines the cumulative count distribution of the digitized numeric value data in the storage unit, using this specified resolution; and

- a procedure which determines the numeric value range or numeric value with the prescribed rank from this determined cumulative count distribution;

wherein the specified resolution is increased in steps based on the range of numeric values of the prescribed rank.